

polarzero

software engineer

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Most of my experience as a SE is in AI and blockchain, and nearly all of my work has been open source, whether for a company, on contract, or independently. My current focus is on working sensibly with AI: refining my workflows as the core harness for doing good work, without getting one-shot by obsessive AI optimization or losing sight of architecture, design, product, and taste.

I'm interested in emergent capabilities, both in how frontier models behave and in how people evolve as they start using AI seriously. I try to keep as much skin in the game as possible by experimenting myself, discussing with peers I respect, and paying attention to early shifts in DevX, UX, tooling, interfaces, and product habits. Adjacent interests include local-first apps and capabilities, fully onchain games, and developer tooling.

The more I learn, the more the engineering side becomes intuitive, and the more I can think about product and intent. I'm trying to become more product-minded while keeping the discipline and curiosity to tackle unfamiliar problems with a good methodology.

WORK

2026-04 now	svvy A strategic coding workbench for directing bounded, workflow-backed agent work <ul style="list-style-type: none">• svvy: organizes coding work around orchestrator sessions that hold product intent, route implementation into bounded threads, and reconcile durable results from structured, inspectable workflows those threads supervise without bloating orchestrator context, while letting you steer at any layer.• electrobun-browser-tools: shipped an inspection and driving bridge for Electrobun apps, exposing windows, views, layout trees, DOM state, logs, events, screenshots, and Playwright-style locators to agents.• electrobun-e2e: shipped shared end-to-end infrastructure for running Electrobun desktop apps headlessly in OrbStack Linux environments.• Built with Electrobun, Svelte, Pi, and Smithers. github	2024-04 2025-03	Primodium Worked at a startup backed by Alliance, Paradigm, and A16Z Games, exploring onchain games and crypto user-facing products <ul style="list-style-type: none">• DEX Indexer: shipped a Yellowstone gRPC Typescript indexer for Solana DEX trades.• DEX GraphQL: shipped a Hasura + Timescale GraphQL client for querying DEX activity & analytics on Solana.• DEX Server: contributed server/package work around buy/sell flows, SOL/USD price caching, transaction analytics, Hasura/cache integration, Docker/package workflows, and docs.• Tub: contributed across the Solana indexer, GraphQL/Hasura/Timescale layer, dashboard/explorer, server analytics, and iOS query/chart/transaction integration surfaces.• Gasless server: shipped a MUD-compatible gasless server library for EVM chains.• Primodium Empires: contributed client UI/game tooling, cheatcodes, transaction feedback, keeper/deployment infrastructure, and contract test/audit-prep work, while owning the artist handoff loop for integrating art and animations into the game.• Reactive Tables: shipped a state management library for onchain games built on MUD for Typescript & React.• Primodium v0.11: took ownership of the sync/indexer and database stack, and shipped client/core rendering work, game-object interaction fixes, reactive-table integration, package/build fixes, and browser profiling-driven performance optimizations.• Open-source release: owned the public release pass for the work above, including documentation for each package and shipping the open-sourced libraries and containers. website github twitter
2025-04 now	Tevm Contributing to a multi-language library for running an EVM in every environment <ul style="list-style-type: none">• @tevm/compiler: shipped a Solidity & Vyper compiler around Foundry compilers for Typescript.• tevm-monorepo: contributed to call/debug and tracing methods, a MUD plugin for optimistic updates, storage layout and pre/post-state tooling, and various other runtime, API, build, and documentation contributions.• guillotine: contributed to a Zig EVM, including a Zig devtool and BubbleTea CLI for call disassembly and step-by-step tracing, Go/C/WASM/TypeScript SDK bindings, EVM semantics fixes, and research-heavy work on hardfork support, gas accounting, and execution spec fixtures.• guillotine-mini: contributed WASI/WASM build and bindings, and research-heavy EVM tracing/debugging work around WASM constraints, threading, debugger architecture, and dispatch-level execution hooks.• @tevm/test-matchers: shipped a Javascript library that extends Vitest with EVM-related test matchers.• @tevm/test-node: shipped a Javascript library to snapshot EVM JSON-RPC calls in Vitest/Bun. website github twitter	2023-01-23 2023-03-07	Chainlink Functions Tested Chainlink Functions across alpha and beta releases with public examples <ul style="list-style-type: none">• Tested Chainlink Functions during Alpha (01-03/2023) and Beta (09/2023); provided some now outdated examples and demo for showcasing during release.• Next.js starter.• cross-chain ERC20 balance verification.• onchain Twitter verifier. website docs
2024-02 2024-03	Research: EVM gas benchmarks EVM gas benchmarking across airdrops and tooling <ul style="list-style-type: none">• Benchmarked ERC20/721/1155 airdrops and cross-validated Foundry, Hardhat, and Tevm gas reports.	2023-11 2023-12	Research: EVM security EVM security research using fuzzing and formal verification <ul style="list-style-type: none">• Tested Glider, storage collision, and ERC1155A cases with Foundry, Halmos, and Certora.

RESEARCH

EXPERIMENTS

2025-03
2025-05

evmstate
EVM state tracing and visualization library for transaction diffs

- Traces local VM or live block transactions, labels storage slots, and outputs semantic state diffs.

[github](#) [docs](#)

2025-04-13
2025-04-20

nightwatch
Public research archive for onchain scam investigations

- Catalogs Twitter and Telegram sleuth research in a Remix, Neon, and Deno research tool.

[website](#) [github](#) [twitter](#)

2024-02-03
2024-04-01

savvy
Browser tool for simulating and visualizing EVM activity

- Built with Tevm, Whatsabi, and Next.js to fork EVM chains and visualize interactions and gas usage.

[website](#) [github](#) [twitter](#)

2023-01
2023-05

Experiments: web-based 3D & spatial audio
Web 3D and spatial audio experiments

- Built Three.js/R3F projects for onchain collectibles, political graphs, virtual worlds, and music NFT visuals.

2023-05-22
2023-06-11

cascade
Decentralized crowdfunding with automated recurring payments

- Built a Chainlink Fall 2023 hackathon app for secured, flexible contributor payments to founders.

[website](#) [github](#) [docs](#)

2022-10-17
2022-11-19

promise
Onchain accountability app for founder commitments

- Built a dapp that records founder promises onchain and ties them to identity.
- Won Chainlink Top Quality Projects and QuickNode 1st Prize.

[website](#) [github](#) [docs](#)

WRITING

2023-10-27
2023-11-07

Blockchain, but for real
Blockchain fundamentals, misconceptions, and future outlooks

[article](#)

2023-10-12
2023-10-17

Decentralized systems, end the cycle of indifference
Decentralized governance, delegation, and civic participation

[article](#)

2023-09-22
2023-10-02

Chainlink's new dawn
Developer perspective on Chainlink after CCIP

[article](#)

2023-09-17
2023-09-18

Smart contract security, terminology of a review
Smart contract security review terminology for newcomers

[article](#)

2023-06-28
2023-06-29

Lesson #0, fundamentals of Solidity storage
Solidity storage layout and EVM data management fundamentals

[article](#)

2022-05-10
2022-05-14

What is the metaverse anyway?
Research-based explainer on immersive virtual worlds

[article](#)

EDUCATION

2023-01-03
2023-02-12

Alchemy University
Ethereum bootcamp: cryptography, data structures, EVM, smart contracts

- Seven-week online Ethereum bootcamp with public GitHub coursework.

[website](#) [github](#)

2022-11-27
2022-12-06

Three.js Journey
WebGL/Three.js course: R3F, shaders, physics, optimization

- Built web-based 3D projects with React Three Fiber and Drei.

[website](#) [github](#)

2022-09-23
2022-10-15

Fullstack Solidity/JavaScript course
Solidity/JavaScript smart contract course by Patrick Collins

- Covered core blockchain concepts and fullstack smart contract development.

[website](#) [github](#)

2022-02-05
2022-06-12

The Odin Project
Open-source fullstack JavaScript curriculum: Node, Express, React

- Covered JavaScript, Node.js, Express, MongoDB, and React.

[website](#)

2020
2022

Master in Music and Music Production
Master's degree, SAE Institute Paris: music and music production

- Thesis on immersive audio integration in virtual worlds and Web 3.0.

[website](#) [thesis](#) [pdf](#)

2019
2020

Bachelor in Music and Sound Engineering
Bachelor's degree, Universite Gustave Eiffel: music and sound engineering

- Musicology, harmony, acoustics, recording, and sound design.

[website](#)

2017
2019

Advanced Technician Certificate in Audiovisual Production
Advanced Technician Certificate, Lycee Suger: audiovisual production

- Sound engineering major with recording, sound design, post-production, and acoustics.

[website](#)